

ConocoPhillips

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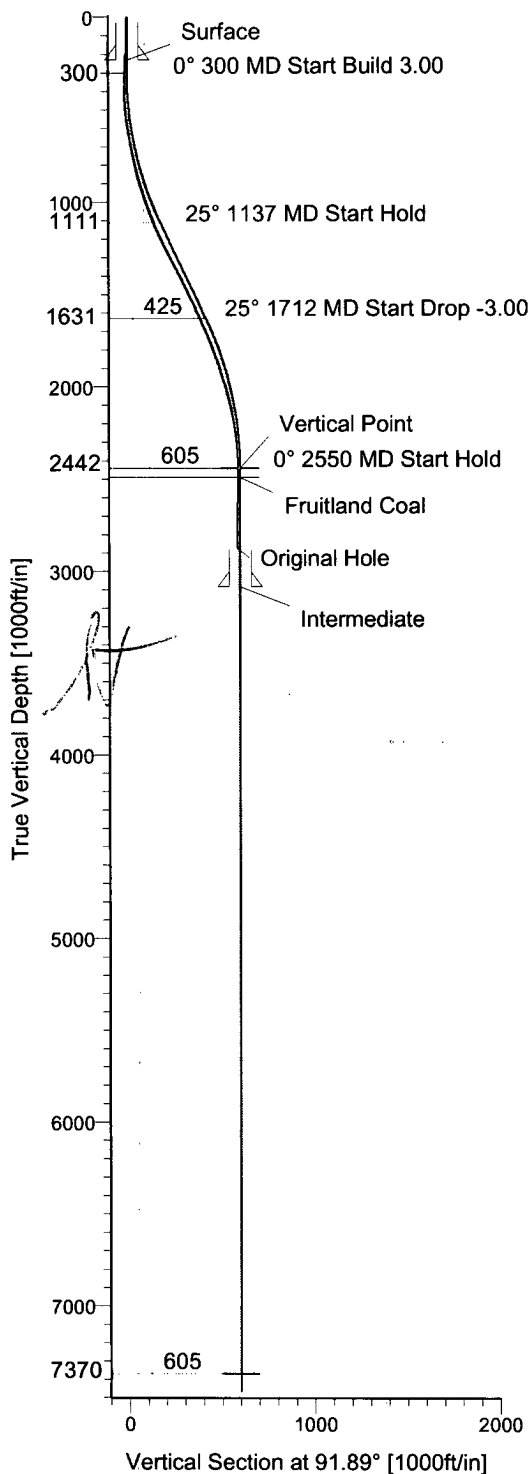
Field: San Juan County, NM
Site: State Com I No. 5B
Well: Well #5B
Wellpath: Original Hole
Plan: Plan #2

ROAD NOV 14/06
OIL CONS. DIST. 3



Azimuths to Grid North
True North: -0.06°
Magnetic North: 10.43°

Magnetic Field
Strength: 51354nT
Dip Angle: 63.69°
Date: 8/10/2006
Model: igrf2005



FIELD DETAILS

San Juan County, NM
New Mexico
USA

Geodetic System: US State Plane Coordinate System 1927
Ellipsoid: NAD27 (Clarke 1866)
Zone: New Mexico, Western Zone
Magnetic Model: igrf2005

System Datum: Mean Sea Level
Local North: Grid North

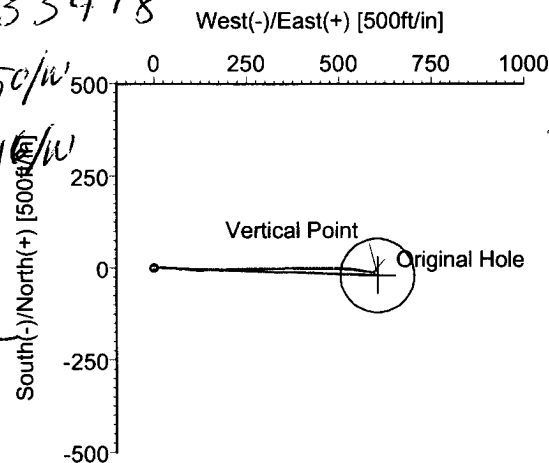
SITE DETAILS

State Com I No. 5B
Section 36 T31N R9W
San Juan County, NM

Site Centre Latitude: 36°51'34.344N
Longitude: 107°44'24.443W

Ground Level: 5947.00
Positional Uncertainty: 0.00
Convergence: 0.06

30-045-33478
SURFACE 740/N 150/W
(Int) BHL 751/N 740/W



WELLPATH DETAILS

Original Hole

Rig:	SITE	0.00ft
Ref. Datum:	Origin +N/-S	Origin +E/-W
V. Section Angle	Starting From TVD	
91.89°	0.00	0.00

CASING DETAILS

No.	TVD	MD	Name	Size
1	230.00	230.00	Surface	9.625
2	3085.00	3192.52	Intermediate	7.000

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Shape
Vertical Point	2442.00	-20.00	605.00	2132127.68	527873.81	Circle (Radius: 100)
PBHL	7370.00	-20.00	605.00	2132127.68	527873.81	Point

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	91.89	0.00	0.00	0.00	0.00	0.00	0.00	
2	300.00	0.00	91.89	300.00	0.00	0.00	0.00	0.00	0.00	
3	1137.44	25.12	91.89	1110.86	-5.97	180.58	3.00	91.89	180.68	
4	1712.08	25.12	91.89	1631.14	-14.03	424.42	0.00	0.00	424.65	
5	2549.52	0.00	91.89	2442.00	-20.00	605.00	3.00	180.00	605.33	Vertical Point
6	7477.52	0.00	91.89	7370.00	-20.00	605.00	0.00	91.89	605.33	PBHL

Ryan Energy Technologies

Survey Report

Company: ConocoPhillips		Date: 8/20/2006		Time: 08:56:39		Page: 1	
Field: San Juan County, NM		Co-ordinate(NE) Reference:		Site: State Com I No. 5B, Grid North			
Site: State Com I No. 5B		Vertical (TVD) Reference:		SITE: 0.0			
Well: Well #5B		Section (VS) Reference:		Well (0.00N,0.00E,91.89Azi)			
Wellpath: Original Hole		Survey Calculation Method:		Minimum Curvature		Db: Sybase	

Field: San Juan County, NM New Mexico USA		Map System: US State Plane Coordinate System 1927		Map Zone: New Mexico, Western Zone	
Geo Datum: NAD27 (Clarke 1866)		Coordinate System: Site Centre		Geomagnetic Model: igrf2005	
Sys Datum: Mean Sea Level					

Site: State Com I No. 5B Section 36 T31N R9W San Juan County, NM					
Site Position:	Northing: 2132147.68 ft	Latitude:	36	51	34.344 N
From: Geographic	Easting: 527268.81 ft	Longitude:	107	44	24.443 W
Position Uncertainty: 0.00 ft		North Reference:	Grid		
Ground Level: 5947.00 ft		Grid Convergence:	0.06 deg		

Well: Well #5B		Slot Name:			
Well Position:	+N/-S 0.00 ft	Northing: 2132147.68 ft	Latitude:	36	51 34.344 N
	+E/-W 0.00 ft	Easting : 527268.81 ft	Longitude:	107	44 24.443 W
Position Uncertainty:	0.00 ft				

Wellpath: Original Hole		Drilled From: Surface	
Current Datum: SITE	Height 0.00 ft	Tie-on Depth:	0.00 ft
Magnetic Data: 8/10/2006		Above System Datum:	Mean Sea Level
Field Strength: 51354 nT		Declination:	10.48 deg
Vertical Section:	Depth From (TVD)	Mag Dip Angle:	63.69 deg
	+N/-S ft	+E/-W ft	Direction deg
0.00	0.00	0.00	91.89

Survey Program for Definitive Wellpath			
Date: 8/20/2006		Validated: No	
Actual From ft	To ft	Version: 0	Toolcode
			Tool Name
269.00	2986.00	Ryan MWD (269.00-2986.00)	MWD
			Standard MWD

Survey										
MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	TIE LINE
269.00	2.60	259.00	268.91	-1.16	-5.99	-5.95	0.97	0.97	0.00	MWD
300.00	2.50	261.50	299.88	-1.40	-7.35	-7.30	0.48	-0.32	8.06	MWD
331.00	2.60	259.70	330.85	-1.62	-8.71	-8.65	0.41	0.32	-5.81	MWD
363.00	1.80	262.50	362.82	-1.82	-9.92	-9.86	2.52	-2.50	8.75	MWD
394.00	0.70	290.60	393.81	-1.82	-10.58	-10.52	3.96	-3.55	90.65	MWD
426.00	1.30	62.50	425.81	-1.58	-10.44	-10.39	5.76	1.87	412.19	MWD
458.00	3.20	73.40	457.79	-1.16	-9.26	-9.22	6.06	5.94	34.06	MWD
490.00	4.50	75.10	489.71	-0.58	-7.20	-7.17	4.08	4.06	5.31	MWD
521.00	5.90	79.70	520.59	0.02	-4.45	-4.45	4.71	4.52	14.84	MWD
552.00	7.10	82.50	551.39	0.55	-0.99	-1.00	4.00	3.87	9.03	MWD
595.00	8.90	89.90	593.97	0.91	4.98	4.94	4.81	4.19	17.21	MWD
640.00	9.90	93.40	638.36	0.68	12.32	12.29	2.56	2.22	7.78	MWD
685.00	10.30	92.00	682.66	0.31	20.20	20.18	1.04	0.89	-3.11	MWD
730.00	11.30	91.60	726.87	0.05	28.63	28.61	2.23	2.22	-0.89	MWD
775.00	12.40	92.30	770.91	-0.27	37.86	37.85	2.47	2.44	1.56	MWD
820.00	13.50	94.80	814.76	-0.90	47.93	47.93	2.74	2.44	5.56	MWD
865.00	14.90	94.40	858.39	-1.78	58.93	58.96	3.12	3.11	-0.89	MWD
910.00	16.50	95.20	901.71	-2.81	71.06	71.12	3.59	3.56	1.78	MWD
955.00	17.90	95.20	944.69	-4.01	84.31	84.40	3.11	3.11	0.00	MWD
1005.00	18.70	94.40	992.16	-5.32	99.96	100.08	1.68	1.60	-1.60	MWD
1045.00	19.50	91.30	1029.96	-5.97	113.03	113.16	3.23	2.00	-7.75	MWD
1090.00	21.00	89.20	1072.18	-6.03	128.60	128.73	3.70	3.33	-4.67	MWD

Ryan Energy Technologies

Survey Report

Company: ConocoPhillips Field: San Juan County, NM Site: State Com I No. 5B Well: Well #5B Wellpath: Original Hole	Date: 8/20/2006 Time: 08:56:39 Page: 2 Co-ordinate(NE) Reference: Site: State Com I No. 5B, Grid North Vertical (TVD) Reference: SITE 0.0 Section (VS) Reference: Well (0.00N,0.00E,91.89Azi) Survey Calculation Method: Minimum Curvature Db: Sybase
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Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
1135.00	22.30	87.80	1114.00	-5.59	145.19	145.30	3.11	2.89	-3.11	MWD
1180.00	23.50	87.80	1155.46	-4.91	162.69	162.76	2.67	2.67	0.00	MWD
1225.00	24.90	89.20	1196.50	-4.44	181.13	181.18	3.36	3.11	3.11	MWD
1315.00	27.40	89.20	1277.28	-3.88	220.79	220.80	2.78	2.78	0.00	MWD
1405.00	27.30	89.50	1357.22	-3.41	262.13	262.10	0.19	-0.11	0.33	MWD
1495.00	26.40	89.50	1437.52	-3.06	302.78	302.72	1.00	-1.00	0.00	MWD
1585.00	24.90	89.20	1518.65	-2.62	341.74	341.64	1.67	-1.67	-0.33	MWD
1675.00	24.40	88.80	1600.45	-1.97	379.27	379.12	0.59	-0.56	-0.44	MWD
1720.00	23.80	89.50	1641.52	-1.69	397.64	397.48	1.48	-1.33	1.56	MWD
1765.00	23.60	90.20	1682.73	-1.64	415.73	415.55	0.77	-0.44	1.56	MWD
1810.00	23.00	90.20	1724.06	-1.71	433.53	433.34	1.33	-1.33	0.00	MWD
1855.00	21.50	89.90	1765.71	-1.72	450.56	450.37	3.34	-3.33	-0.67	MWD
1900.00	20.20	89.90	1807.76	-1.70	466.58	466.38	2.89	-2.89	0.00	MWD
1945.00	19.40	90.20	1850.10	-1.71	481.82	481.62	1.79	-1.78	0.67	MWD
1990.00	17.90	90.60	1892.73	-1.81	496.21	496.00	3.35	-3.33	0.89	MWD
2035.00	17.30	93.40	1935.63	-2.28	509.81	509.60	2.31	-1.33	6.22	MWD
2080.00	17.10	94.40	1978.62	-3.18	523.08	522.90	0.79	-0.44	2.22	MWD
2125.00	15.80	94.40	2021.77	-4.16	535.79	535.63	2.89	-2.89	0.00	MWD
2170.00	14.60	96.90	2065.20	-5.31	547.53	547.40	3.04	-2.67	5.56	MWD
2215.00	13.10	99.70	2108.89	-6.85	558.19	558.11	3.65	-3.33	6.22	MWD
2260.00	11.40	99.70	2152.86	-8.46	567.60	567.57	3.78	-3.78	0.00	MWD
2305.00	9.90	96.60	2197.09	-9.65	575.82	575.83	3.57	-3.33	-6.89	MWD
2350.00	8.40	95.20	2241.51	-10.39	582.94	582.97	3.37	-3.33	-3.11	MWD
2395.00	6.50	100.10	2286.13	-11.14	588.72	588.77	4.45	-4.22	10.89	MWD
2440.00	4.80	102.90	2330.91	-12.01	593.06	593.14	3.83	-3.78	6.22	MWD
2485.00	3.30	110.30	2375.80	-12.88	596.11	596.21	3.52	-3.33	16.44	MWD
2530.00	1.10	120.10	2420.76	-13.54	597.70	597.82	4.94	-4.89	21.78	MWD
2620.00	1.10	307.50	2510.76	-13.45	597.77	597.88	2.44	0.00	-191.78	MWD
2710.00	0.60	317.70	2600.75	-12.58	596.76	596.85	0.58	-0.56	11.33	MWD
2800.00	0.40	335.30	2690.74	-11.94	596.31	596.38	0.28	-0.22	19.56	MWD
2890.00	0.40	18.50	2780.74	-11.36	596.28	596.33	0.33	0.00	48.00	MWD
2986.00	0.50	10.40	2876.74	-10.63	596.46	596.49	0.12	0.10	-8.44	MWD